



May 10, 2008

Dr. Leah Evison
U. S. EPA - Region 5 (SR-6J)
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

**Re: Sauget Area 2 Site – October 3, 2002 Unilateral Administrative Order
(UAO) Groundwater Operable Unit
Monthly Report; April 1 - April 30, 2008 Reporting Period**

Dear Dr. Evison:

Attached is the Monthly Report for the Sauget Area 2 Site October 3, 2002 Unilateral Administrative Order (UAO) - Groundwater Operable Unit. This submittal is in fulfillment of the monthly reporting requirements of the UAO, Section XII, paragraph 62, Progress Reports. This report is for the period April 1 – April 30, 2008.

Sincerely,

A handwritten signature in black ink that reads "Steven D. Smith / RSW".

Steven D. Smith
Project Coordinator

cc: Ken Bardo, - U. S. EPA
Mayor Sauget - Sauget, IL
Sandra Bron – IEPA
Mike Coffey - USFWS
Village of Sauget – c/o P. H. Weis & Associates (Attn: Brian Nelson)
Mayor Frank Bergman – Cahokia
L. Glen Kurowski - Monsanto
Cathleen Bumb – Solutia
Linda Tape - Husch Blackwell Sanders, LLP
Richard Williams – Solutia

Sauget Area 2 Site - Sauget, Illinois

October 3, 2002 UAO – Groundwater Operable Unit

Status Report

Date of Report: May 10, 2008
Period Covered: April 1 - April 30, 2008

Work Performed During the Reporting Period

Site Work

- No site work was carried out during the reporting period.

Groundwater Treatment

- As agreed upon with USEPA, the Groundwater Migration Control System (GMCS) continues to be operated to maintain the total pumping rate equal to the computed inflow rate, based on the average of the gradients measured in the two existing pairs of piezometers located immediately upgradient of the Site R landfill. The system was operated in the above manner for the month of April. However, no pumping occurred during the entire month because of the high river stage.
- The flooding that occurred in the EW-2 valve vault on March 19th damaged the remote valve actuator for this well. The unit was removed on April 1st and sent for repair. It was reinstalled on April 28th.
- On April 22nd, water levels were manually measured in all of the piezometers as a check on the instrument calibrations. These measurements indicated that the inside members of piezometer pairs PZ-1 and PZ-2 required recalibration and this was completed on April 25th.
- The signal from piezometer PZ-4 IN was lost on April 14th. Repairs were made on April 22nd, but the instrument readings were still unsatisfactory and the sensor was changed on April 28th.
- Comparison of the Mississippi River stage readings from the bubbler gauge with the USGS gauge on the Eads Bridge indicated that the river levels being recorded by the system were incorrect. The surge module for the bubbler gauge input was changed and recalibrated on April 28th. The readings have corresponded well with the Eads Bridge gauge since.

- Over the past several months, ongoing problems have been experienced with piezometer pair PZ-8. This pair is used in the computation of the groundwater gradient immediately upgradient of the GMCS and, hence, in the computation of the inflow rate into the system. The cause of the problems was almost invariably the presence of moisture in the surge protection module of the recorder. In order to permanently solve this problem, it was decided to raise the electronics modules of three of the four piezometer pairs upgradient of the GMCS above grade (the PZ-6, PZ-7, and PZ-8 pairs). The fourth pair (PZ-5) is not subject to inundation. Work began on this project in March and by the end of April the electronic modules for piezometers PZ-8U, PZ-8D, PZ-7D and PZ-6D had been raised above grade. The modules for piezometers PZ-7U and PZ-6U were not accessible and will be relocated when the mulch bales presently covering the boxes are removed (expected to occur in May or June).
- Comments on various documents submitted to the Agency were received on February 12th. These documents include:
 - Three Technical Memorandums (TMs) for Interim Operating Periods (IOPs) 1, 2 and 3
 - Quarterly Groundwater Sampling Reports
 - Semi-Annual River Sampling Reports
 - Draft Extraction Well Step Test Memo
 - Draft Operations and Maintenance Plan
 - Draft Barrier Wall Completion Report

A meeting was held on April 29th to discuss these comments. The comments have been reviewed and the following documents are being prepared for submission to the Agency by the end of May:

- An Operating Report covering the period between February 2006 and December 2007.
- A Remedial Action Report.
- A Work Plan for computing the mass flux to the river sediments and surface water following construction of the Interim Remedy was submitted on March 17, 2008. The Work Plan was discussed at the April 29th meeting and the Agency requested that the proposed methodology be revised to compute the chemical flux entering the river, as opposed to the groundwater flux.
- Alternatives to the method currently used to compute the pumping rate (Darcy's Law) were also discussed at the April 29th meeting. It was agreed that the uncertainties in the parameters used in the Darcy's Law computation could be avoided if the groundwater extraction rate was adjusted such that the flow vectors entering the barrier wall system were parallel to the arms of the barrier. A

technical memorandum will be prepared and submitted to the Agency proposing a method to achieve this.

- Collection of surface water and sediment samples in the Mississippi River scheduled to occur in March was postponed because of the high river stage. Collection of these samples will be rescheduled when the river stage declines sufficiently to ensure that groundwater is discharging to the river.
- Water level and pumping data for the reporting period are attached.

Schedule

The documents listed above will be used to establish that the Remedial Action at Site R is complete.

Submittals During Reporting Period

- The validated results for the second 2007 semi-annual sediment and surface water sampling in the Mississippi River were submitted on April 14, 2008.

Work Scheduled for Next Reporting Period

- Continue operating the extraction system to maintain the total pumping rate equal to the computed inflow rate.
- Analyze first quarter 2008 groundwater samples from the performance monitoring wells. .
- Monitor the Mississippi River stage in order to determine an appropriate time for collection of the first 2008 semi-annual surface water and sediment samples.
- Submit an Operating Report covering the period between February 2006 and December 2007 and a Remedial Action Report for the GMCS construction.
- Submit a Technical Memorandum describing the methodology proposed to replace Darcy's Law for use in computing the groundwater extraction rate.

PUMPING DATA

GROUNDWATER MIGRATION CONTROL SYSTEM

APRIL 2008 DAILY AVERAGE PUMPING RATES AND GROUNDWATER LEVELS

Date/Time		PUMPING RATE					SWL
		Computed Q	Total Q	EW-1 Q	EW-2 Q	EW-3 Q	
04/01/2008	Daily Average	0.00	0.00	0.00	0.00	0.00	398.92
04/02/2008	Daily Average	0.00	0.00	0.00	0.00	0.00	400.17
04/03/2008	Daily Average	0.00	0.00	0.00	0.00	0.00	399.97
04/04/2008	Daily Average	0.00	0.00	0.00	0.00	0.00	399.67
04/05/2008	Daily Average	0.00	0.00	0.00	0.00	0.00	399.56
04/06/2008	Daily Average	0.00	0.00	0.00	0.00	0.00	399.06
04/07/2008	Daily Average	0.00	0.00	0.00	0.00	0.00	398.40
04/08/2008	Daily Average	0.00	0.00	0.00	0.00	0.00	398.20
04/09/2008	Daily Average	0.00	0.00	0.00	0.00	0.00	398.10
04/10/2008	Daily Average	0.00	0.00	0.00	0.00	0.00	398.59
04/11/2008	Daily Average	0.00	0.00	0.00	0.00	0.00	401.39
04/12/2008	Daily Average	0.00	0.00	0.00	0.00	0.00	403.52
04/13/2008	Daily Average	0.00	0.00	0.00	0.00	0.00	403.99
04/14/2008	Daily Average	0.00	0.00	0.00	0.00	0.00	403.71
04/15/2008	Daily Average	0.00	0.00	0.00	0.00	0.00	403.23
04/16/2008	Daily Average	0.00	0.00	0.00	0.00	0.00	402.70
04/17/2008	Daily Average	0.00	18.15	5.85	6.00	6.30	401.94
04/18/2008	Daily Average	0.00	0.00	0.00	0.00	0.00	401.42
04/19/2008	Daily Average	0.00	0.00	0.00	0.00	0.00	401.40
04/20/2008	Daily Average	0.00	0.00	0.00	0.00	0.00	400.97
04/21/2008	Daily Average	0.00	0.00	0.00	0.00	0.00	401.25
04/22/2008	Daily Average	0.00	0.00	0.00	0.00	0.00	402.06
04/23/2008	Daily Average	0.00	0.00	0.00	0.00	0.00	402.54
04/24/2008	Daily Average	0.00	0.00	0.00	0.00	0.00	402.63
04/25/2008	Daily Average	0.00	0.00	0.00	0.00	0.00	402.74
04/26/2008	Daily Average	0.00	0.00	0.00	0.00	0.00	403.28
04/27/2008	Daily Average	0.00	0.00	0.00	0.00	0.00	403.62
04/28/2008	Daily Average	0.00	0.00	0.00	0.00	0.00	407.03
04/29/2008	Daily Average	0.00	0.00	0.00	0.00	0.00	410.55
04/30/2008	Daily Average	0.00	0.00	0.00	0.00	0.00	410.43

GROUNDWATER MIGRATION CONTROL SYSTEM

APRIL 2008 DAILY AVERAGE PUMPING RATES AND GROUNDWATER LEVELS

		GROUNDWATER LEVELS											
Date/Time		PZ-5U	PZ-5D	Delta	PZ-6U	PZ-6D	Delta	PZ-7U	PZ-7D	Delta	PZ-8U	PZ-8D	Delta
04/01/2008	Daily Average	396.87	397.20	0.33	396.80	396.48	-0.33	396.53	396.40	-0.13	396.83	397.80	0.97
04/02/2008	Daily Average	397.35	397.90	0.55	397.16	396.86	-0.30	396.85	396.77	-0.09	397.27	398.66	1.39
04/03/2008	Daily Average	397.71	398.24	0.53	397.52	397.26	-0.26	397.23	397.15	-0.08	397.59	398.92	1.33
04/04/2008	Daily Average	397.78	398.22	0.43	397.63	397.34	-0.29	397.35	397.25	-0.10	397.69	398.84	1.16
04/05/2008	Daily Average	397.91	398.33	0.43	397.79	397.49	-0.30	397.50	397.39	-0.10	397.83	398.98	1.15
04/06/2008	Daily Average	398.01	398.36	0.35	397.93	397.66	-0.27	397.67	397.55	-0.12	397.95	398.91	0.96
04/07/2008	Daily Average	397.94	398.19	0.24	397.92	397.62	-0.30	397.67	397.53	-0.14	397.91	398.64	0.73
04/08/2008	Daily Average	398.02	398.21	0.18	398.01	397.72	-0.29	397.77	397.63	-0.14	397.97	398.62	0.65
04/09/2008	Daily Average	397.98	398.10	0.12	397.97	397.67	-0.30	397.74	397.58	-0.16	397.93	398.49	0.55
04/10/2008	Daily Average	398.34	398.50	0.16	398.35	398.02	-0.33	398.07	397.93	-0.14	398.23	398.90	0.67
04/11/2008	Daily Average	398.88	399.40	0.52	398.70	398.35	-0.35	398.36	398.27	-0.09	398.73	400.13	1.41
04/12/2008	Daily Average	399.57	400.40	0.83	399.21	398.87	-0.33	398.84	398.79	-0.05	399.39	401.42	2.03
04/13/2008	Daily Average	400.04	400.95	0.92	399.65	399.32	-0.32	399.27	399.23	-0.04	399.89	402.03	2.14
04/14/2008	Daily Average	400.34	401.22	0.87	399.99	399.66	-0.33	399.63	399.58	-0.05	400.22	402.26	2.04
04/15/2008	Daily Average	400.64	401.41	0.77	400.32	400.02	-0.30	399.97	399.92	-0.08	400.52	402.35	1.83
04/16/2008	Daily Average	400.86	401.53	0.67	400.58	400.29	-0.29	400.28	400.18	-0.09	400.75	402.42	1.67
04/17/2008	Daily Average	400.88	401.45	0.57	400.70	400.33	-0.37	400.36	400.29	-0.08	400.80	402.31	1.50
04/18/2008	Daily Average	400.90	401.39	0.49	400.80	400.47	-0.33	400.49	400.40	-0.09	400.87	402.12	1.25
04/19/2008	Daily Average	400.89	401.31	0.42	400.81	400.47	-0.34	400.52	400.41	-0.11	400.87	402.02	1.15
04/20/2008	Daily Average	400.87	401.26	0.39	400.81	400.47	-0.33	400.53	400.41	-0.12	400.82	401.88	1.06
04/21/2008	Daily Average	401.00	401.44	0.44	400.93	400.57	-0.36	400.65	400.54	-0.11	400.98	402.21	1.23
04/22/2008	Daily Average	401.25	401.78	0.53	401.16	400.80	-0.36	400.85	400.76	-0.10	401.23	402.58	1.35
04/23/2008	Daily Average	401.48	402.00	0.52	401.34	400.99	-0.35	401.02	400.94	-0.09	401.42	402.87	1.45
04/24/2008	Daily Average	401.66	402.25	0.59	401.60	401.26	-0.34	401.27	401.20	-0.07	401.69	403.13	1.44
04/25/2008	Daily Average	401.84	402.42	0.58	401.78	401.45	-0.33	401.46	401.39	-0.06	401.88	403.29	1.40
04/26/2008	Daily Average	401.90	402.50	0.60	401.77	401.41	-0.36	401.46	401.38	-0.08	401.91	403.42	1.52
04/27/2008	Daily Average	402.23	402.83	0.61	402.08	401.72	-0.36	401.75	401.67	-0.08	402.21	403.79	1.58
04/28/2008	Daily Average	402.48	403.09	0.61	402.32	401.97	-0.35	402.03	401.95	-0.08	402.46	404.01	1.55
04/29/2008	Daily Average	402.52	403.15	0.63	402.42	402.04	-0.38	402.10	402.03	-0.07	402.53	404.10	1.57
04/30/2008	Daily Average	402.79	403.36	0.58	402.64	402.32	-0.31	402.37	402.30	-0.07	402.76	404.25	1.49

GROUNDWATER MIGRATION CONTROL SYSTEM

APRIL 2008 DAILY AVERAGE PUMPING RATES AND GROUNDWATER LEVELS

Date/Time		GROUNDWATER LEVELS							
		PZ-1_OUTSI	PZ-1_INSIDE	PZ-2_OUTSI	PZ-2_INSIDE	PZ-3_OUTSI	PZ-3_INSIDE	PZ-4_OUTSI	PZ-4_INSIDE
		DE		DE		DE		DE	
04/01/2008	Daily Average	399.17	394.26	400.53	397.33	400.19	395.89	398.81	396.69
04/02/2008	Daily Average	400.69	394.76	402.67	397.76	402.17	396.39	400.21	397.22
04/03/2008	Daily Average	400.71	395.23	402.33	398.19	401.91	396.82	400.24	397.46
04/04/2008	Daily Average	400.42	395.25	401.85	398.26	401.48	396.84	399.98	397.37
04/05/2008	Daily Average	400.46	395.38	401.86	398.41	401.48	396.98	400.02	397.37
04/06/2008	Daily Average	400.11	395.52	401.13	398.55	400.81	397.13	399.69	397.33
04/07/2008	Daily Average	399.54	395.46	400.26	398.49	399.98	397.05	399.13	397.17
04/08/2008	Daily Average	399.32	395.56	399.83	398.59	399.60	397.14	398.93	397.21
04/09/2008	Daily Average	399.13	395.46	399.61	398.55	399.38	397.06	398.75	397.11
04/10/2008	Daily Average	399.75	395.87	400.32	398.90	400.06	397.43	399.56	396.75
04/11/2008	Daily Average	402.52	396.23	404.84	399.29	404.29	397.86	402.01	397.37
04/12/2008	Daily Average	404.91	396.87	408.41	399.90	407.66	398.52	404.37	398.57
04/13/2008	Daily Average	405.62	397.38	409.29	400.39	408.46	399.02	405.12	399.16
04/14/2008	Daily Average	405.62	397.74	408.91	400.73	408.22	399.38	405.12	399.14
04/15/2008	Daily Average	405.31	398.08	408.20	401.02	407.53	399.72	404.86	
04/16/2008	Daily Average	405.02	398.33	407.54	401.25	406.95	400.00	404.59	
04/17/2008	Daily Average	404.50	398.37	406.64	401.33	406.11	400.03	404.14	
04/18/2008	Daily Average	403.92	398.45	405.63	401.44	405.16	400.05	403.59	
04/19/2008	Daily Average	403.68	398.40	405.13	401.43	404.76	400.01	403.31	
04/20/2008	Daily Average	403.47	398.38	404.88	401.44	404.48	400.03	403.13	
04/21/2008	Daily Average	403.96	398.52	405.63	401.55	405.20	400.16	403.64	
04/22/2008	Daily Average	404.65	398.77	406.61	401.81	406.14	400.42	404.33	399.53
04/23/2008	Daily Average	405.04	398.96	407.08	401.98	406.56	400.62	404.72	400.27
04/24/2008	Daily Average	405.30	399.23	407.25	402.28	406.77	400.89	404.98	400.73
04/25/2008	Daily Average	405.45	399.99	407.49	402.07	406.98	401.05	405.14	401.42
04/26/2008	Daily Average	405.79		408.08	401.83	407.55	401.08	405.54	
04/27/2008	Daily Average	406.26		408.69	402.16	408.16	401.41	406.03	
04/28/2008	Daily Average	406.47	400.94	408.81	402.40	408.36	401.66	406.24	402.50
04/29/2008	Daily Average	406.45	401.05	408.78	402.52	408.23	401.72	406.23	402.59
04/30/2008	Daily Average	406.51	401.34	408.64	402.81	408.13	402.01	406.26	402.85